Rayleigh-Brillouin Scattering Studies in Decane and Magnetic Microemulsions

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The Rayleigh-Brillouin spectra of decane were obtained at several temperatures and q-values. The signal from the scattered light was deconvoluted to obtain the actual spectra. We found three Lorentzians without an I_{VH} contribution. The sound attenuation and an inverse relation between the hypersonic sound velocity and the temperature were found. The Rayleigh-Brillouin spectra of decane are compared with the same spectra coming from magnetic microemulsions, dispersed in decane, under magnetic field. Magnetic fluids present an important I_{VH} contribution.